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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,161	09/19/2003	Gholam Peyman	PMAN-25	8452

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EXAMINER	
SHEIKH, HUMERA N	
ART UNIT	**PAPER NUMBER**
1615	

DATE MAILED: 07/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/667,161	PEYMAN, GHOLAM	
	Examiner	Art Unit	
	Humera N. Sheikh	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/2/05;3/16/05;2/2/04;2/17/04*
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of the Application

Receipt of the Petition to make Special request (granted) filed 06/02/05, the Affidavit/Declaration filed 06/02/05 and the Information Disclosure Statements (IDS) filed 06/02/05, 03/16/05, 02/02/04 and 02/17/04 are acknowledged.

Claims 1-36 are pending. Claims 1-36 are rejected.

Oath/Declaration

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

The signature of the inventor is missing.

Affidavit/Declaration

The Declaration submitted June 02, 2005 is defective because it is unsigned.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-36 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-34 of copending Application No. 10/752,124 in view of Ueno (US Pat. No. 6,872,383 B2). Although the conflicting claims are not identical, they are not patentably distinct from each other because similar subject matter is being claimed in both applications. The instant claims are drawn to a composition comprising a solution for intraocular administration containing a concentration in the range between about 1 ng/ml to about 200 μg/ml of at least one of a macrolide antibiotic or mycophenolic acid as a substitute for an ocular or operative fluid. Claims 1-34 of copending application 10/752,124 are drawn to a non-invasive method to treat a diseased eye in a patient comprising topically administering to a patient a composition comprising a concentration ranging between 0.5%$^{w/w}$ to about 10%$^{w/w}$ of a macrolide antibiotic and/or mycophenolic acid in

a pharmaceutically acceptable topical formulation for a duration to achieve a concentration of the macrolide antibiotic and/or mycophenolic acid in a diseased ocular structure sufficient to treat the diseased eye. The claims of each application are directed to non-invasive methods for treating diseases of the eye and each of the applications claim a 'macrolide antibiotic and/or mycophenolic acid'. Regarding instant claim 19, wherein the composition is formulated in various forms (*i.e.*, liposome, microsphere, microvesicle), it is noted that the claim limitations of claim 7 of '124 application also claim such exact forms of the macrolide antibiotic. Additionally, it is noted that claims 3 and 4 of copending '124 claims identical antibiotics as claimed in instant claim 6. The instant application claims a solution for intraocular administration to the eye and is deficient in that it does not teach a topical form (i.e., ointment), as claimed in copending '124 application. The secondary reference of Ueno (US '6,872,383 B2) is relied upon to demonstrate the teaching that it is obvious to one of ordinary skill in the art to employ macrolide antibiotics in various administration forms that include topical (eye ointment) as well as solution forms (eye drops) (see reference column 8, lines 27-57). Therefore, the instant invention is rendered obvious in view of the '124 copending application.

It would be *prima facie* obvious to one of ordinary skill in the art through routine experimentation to determine suitable and efficient means of administering antibiotics to the eye. The expected result would be an administration form that provides for the effective prevention of infections combined with ease and convenience of drug delivery to the patient.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueno (US Pat. No. 6,872,383 B2) in view of Kaswan (US Pat. No. 5,411,952).

Ueno teaches methods for treating ocular disease, particularly dry eye disease by locally administering macrolide compounds of tacrolimus, ascomycin and rapamycin (sirolimus) in effective amounts (see reference column 2, line 64 – col. 3, line 19); (col. 7, line 27 – col. 8, line 57) and Examples. Ueno teaches that the macrolide compound can be administered locally to the eye in amounts of 0.001-10.0 w/v % (col. 8, lines 44-48). Dosage forms include eye drops, eye ointment, powder, granule, tablet, capsule, injection, ointment and the like, with particular preference given to eye drop and eye ointment (col. 8, lines 49-57).

Diseases associated with dry eye that can be treated include hypolacrimattion, alacrima xerophthalmia, Sjögren syndrome, kertoconjunctivitis sicca, Stevens-Johnson syndrome, ocular pemphigoid, marginal blepharitis, diabetes, dry eye observed after cataract operation, allergic conjunctivitis and the like (col. 8, lines 8-17).

Example 1 at column 9 demonstrates an eye drop suspension formulation containing the macrolide antibiotic FK506 (Tacrolimus) in amounts of 0.6 mg (~ 3.5%) in combination with additional ingredients as illustrated in Example 1.

Regarding the drug concentrations claimed, it is noted that while Ueno does not teach the exact claimed amounts of drug, generally, differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). It is the position of the Examiner that Applicants have not demonstrated any unexpected or surprising results attributable to the claimed amounts. Ueno teaches an ocular composition comprising the same ingredients (*i.e.*, macrolide antibiotics) for use in the same field of endeavor and in similar forms (*i.e.*, solutions, eye drops) as desired by Applicant and teaches that effective results are obtained using Ueno's amounts for treatment against eye infections.

With respect to the particular solutions claimed by Applicant in instant claim 5 (irrigation solution, volume replacement solution, wash solution), it is the position of the Examiner that no patentable distinction is seen in the use of Applicant's solution versus that of the prior art, since

the prior art clearly teaches and recognizes the use of solutions (*i.e.*, eye drops) to serve essentially the same purpose, which is to treat eye infections, as also desired by Applicant.

Ueno does not teach the formulation of the composition as at least one of a microcapsule, liposome, polymer, microsphere or microvesicle.

Kaswan ('952) teaches an ocular cyclosporin composition for topical ophthalmic use for treating ocular disorders, wherein the composition can be encapsulated within liposomes or microcapsules (see reference column 2, line 30-43); (col. 3, lines 54-68) Abstract and claims.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the ocular formulations of Ueno by incorporating the microencapsulated or liposomal form as taught by Kaswan because Kaswan explicitly teaches that the composition can be encapsulated within liposomes or microcapsules to provide for delayed or prolonged release of the cyclosporine at a selected site. The expected result would be an improved ocular composition provided in suitable release rates for enhanced treatment against infections in the eye.

Claims 22-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueno (US Pat. No. 6,872,383 B2) in view of Tusé *et al.* (US Pat. No. 6,482,799 B1).

Ueno teaches methods for treating ocular disease, particularly dry eye disease by locally administering macrolide compounds of tacrolimus, ascomycin and rapamycin (sirolimus) in effective amounts (see reference column 2, line 64 – col. 3, line 19); (col. 7, line 27 – col. 8, line

57) and Examples. Ueno teaches that the macrolide compound can be administered locally to the eye in amounts of 0.001-10.0 w/v % (col. 8, lines 44-48). Dosage forms include eye drops, eye ointment, powder, granule, tablet, capsule, injection, ointment and the like, with particular preference given to eye drop and eye ointment (col. 8, lines 49-57).

Diseases associated with dry eye that can be treated include hypolacrimattion, alacrima xerophthalmia, Sjögren syndrome, kertoconjunctivitis sicca, Stevens-Johnson syndrome, ocular pemphigoid, marginal blepharitis, diabetes, dry eye observed after cataract operation, allergic conjunctivitis and the like (col. 8, lines 8-17).

Example 1 at column 9 demonstrates an eye drop suspension formulation containing the macrolide antibiotic FK506 (Tacrolimus) in amounts of 0.6 mg (~ 3.5%) in combination with additional ingredients as illustrated in Example 1.

Regarding the concentrations of drug component claimed, it is noted that while Ueno does not teach the exact claimed amounts of drug, generally, differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). It is the position of the Examiner that Applicants have not demonstrated any unusual and/or unexpected results that accrue from the instant amounts. Ueno teaches an ocular composition comprising the same ingredients (*i.e.*, macrolide antibiotics) for use in the same field of endeavor and in similar forms (*i.e.*, solutions, eye drops) as desired by Applicant and teaches that effective results are obtained using Ueno's amounts for treatment against eye infections. Moreover, suitable amounts

of drug could be routinely determined by one skilled in the art through routine or manipulative experimentation to obtain optimal results, as these are indeed variable parameters attainable within the art.

Ueno does not teach an article comprising an implantable ocular replacement lens.

Tusé *et al.* ('799) teach a contact lens storage system which comprises a container containing ophthalmic compositions useful for storing, cleaning or disinfecting a contact lens (see Abstract and reference column 4, lines 11-22); (col. 24, lines 53-59). Kits for the packaging and/or storage and/or care and/or use of the contact lenses are also provided. The kits can comprise a contact lens shipping package (*e.g.*, vial or blister pack), a storage case, a cleaning vial or case, and the like (col. 25, lines 16-27).

The ophthalmic solutions include antimicrobials and antibiotics, such as erythromycin, for use in the treatment of eye infections (col. 19, lines 9-13); Claim 24 and Abstract.

The ophthalmic solutions may be applied with any kinds of contact lens, including hard contact lenses, oxygen permeable contact lenses, non-water swellable or absorbable soft contact lens, etc. (col. 23, lines 55-60).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the ocular formulations of Ueno to include the contact lens packaging articles, containers and system that is useful for storing, cleaning and disinfecting contact lenses and additionally the antimicrobials and antibiotics, such as erythromycin, which provide antibacterial effects to fight off infection. The expected result would be an efficient and

convenient lens packaging system that comprises therapeutic agents to protect the wearer of lenses and the lenses themselves from infection.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Humera N. Sheikh whose telephone number is (571) 272-0604. The examiner can normally be reached on Monday through Friday from 8:00A.M. to 5:30P.M., alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page, can be reached on (571) 272-0602. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

H. N. Sheikh H. N. Sheikh

Patent Examiner

Art Unit 1615

June 24, 2005